INDEX

IEE Proceedings Part F
Communications, Radar and Signal Processing
Vol. 128, 1981

Abbreviations
- p Paper, address or lecture
- d Discussion on a paper
- a Abstract of paper or address
- e Errata
- s Synopsis of a paper published in full in another Part of the IEE Proceedings

Author index

A

Aatre, V.K., Wong, K.M., and Ramamurthy, N. see Wong, K.M.
Aghvami, A.H., and Mathews, N.A. see Mathews, N.A.
Al-Nuaimi, M.O. Analysis of response of FM mobile receiver in quasisynchronous field p317
Albert-Osaghae, V.K.I., Edwards, J.A., and Parsons, J.D. see Edwards, J.A.
Asghar, S.M., and Clark, A.P. see Clark, A.P.
Aulin, T., Lindell, G., and Sundberg, C-E. Selecting smoothing pulses for partial-response digital FM p237

B

Beasley, M., and Usher, E.S. Use and extrapolation of barrage measurements in formulating PCM planning rules p203
Birrell, N.D. Pre-emptive retransmission for communication over noisy channels p393
Bundell, G.A. Laser-radar signature-processing system p215
Burrows, D.F., and McGeehan, J.P. see McGeehan, J.P.
Burrows, D.F., and McGeehan, J.P. see McGeehan, J.P.

C

Carr, A.E., Cuthbert, L.E., and Olver, A.D. Digital signal processing for target detection in FMCW radar p331
Clark, A.P., and Asghar, S.M. Detection of digital signals transmitted over a known time-varying channel p167
Clark, A.P., and McVerry, F. Channel estimation for an HF radio link p33
Clarke, R.J. Relation between the Karhunen Loève and cosine transforms p359
Clarke, R.N., White, R.A., and Yell, R.W. see White, R.A.
Conti, D.A. Special problems associated with aircraft radomes p412
Cowan, C.F.N., and Mavor, J. New digital adaptive-filter implementation using distributed-arithmetic techniques p225
Crone, G.A.E., Rudge, A.W., and Taylor, G.N. Design and performance of airborne radomes: a review p451
Cunningham, N.A. Modern colour display and processing system for meteorological radars p61
Cuthbert, L.E., Carr, A.E., and Olver, A.D. see Carr, A.E.

D

de Jong, E., and van Etten, W. see van Etten, W.
Dopping-Hepenstal, L.L. Head-up displays. The integrity of flight information p440
Dunlop, A.J. AGC response and target glint p83

IEE Commissioned Review

Hunt, G.H. Airborne electronic displays p465

Dutta, S., and Gott, G.F. Correlation of HF interference spectra with range p193

E

Edwards, J.A., Parsons, J.D., and Albert-Osaghae, V.K.I. Error rate prediction in binary FSK communication systems subjected to impulsive noise p337
Edwards, J.A., Parsons, J.D., and Albert-Osaghae, V.K.I. Error rate prediction in binary FSK communication systems subjected to impulsive noise: an extended second-order technique p342

F

Farhang-Boroujeny, B., and Turner, L.F. Fast converging stochastic gradient algorithm p271

G

Goncalves, J.G.M., and Lea, R.M. LSI module for the implementation of digital filters p353
Goodman, R.M.F., and Winfield, A.F.T. Soft-decision minimum-distance sequential decoding algorithm for convolutional codes p179
Gott, G.F., and Dutta, S. see Dutta, S.
Gupta, S.N., and Jain, V.K. see Jain, V.K.

H

Hagisawa, T., Sekine, M., Ohtani, S., Musha, T., Irabu, T., Kiuchi, E., and Tomita, Y. see Sekine, M.
Hawksford, M.J., and Rezaee, N. Adaptive mean-square-error transversal equaliser p296
Haykin, S., and Ouzas, N. see Ouzas, N.
Hirt, W., and Pasupathy, S. Suboptimal reception of binary CPSK signals p125
Hjelmstad, J., and Skaug, R. Fast synchronisation modem for spread-spectrum communication system using burst-format message signalling p370
Huang, J.P., Reed, I.S., Truong, T.K., and Miller, R.L. see Reed, I.S.
Hunt, G.H. Airborne electronic displays (Commissioned IEE Review) p465

I

Irabu, T., Sekine, M., Ohtani, S., Musha, T., Kiuchi, E., Hagisawa, T., and Tomita, Y. see Sekine, M.
Irwin, G.W. Further results on predicting the maximum-likelihood performance of an unknown channel p223
Irwin, G.W. Predictors of maximum-likelihood performance of an unknown channel p23

J

Jain, V.K., and Gupta, S.N. Optimum receiver for impulsive atmospheric radio noise p189

K

Kazovsky, L.E. Sequential radar detection of border penetration p305
Kekre, H.B., and Khalid, M. Buffer design in a closed form with hybrid input and random server interruptions e82
Khalid, M., and Kekre, H.B. see Kekre, H.B.
Kikkert, C.J. AM/FM modulation standard p379
Kikkert, C.J. New method for generating frequency modulation p135
Kiuchi, E., Sekine, M., Ohtani, S., Musha, T., Irabu, T., Hagisawa, T., and Tomita, Y. see Sekine, M.
Ko, C.C. Jamming rejection capability of broadband Frost power inversion array p140

L

Lea, R.M., and Goncalves, J.G.M. see Goncalves, J.G.M.
Leacy, A.C. AEW Nimrod: the Mission System Avionics p403
Lever, K.V., and Trivedi, M. see Trivedi, M.
Lindell, G., Aulin, T., and Sundberg, C-E. see Aulin, T.
Loy, A.F. Trends in maintainability and reliability of avionic systems with particular reference to DCAD Technical Publication 1/77 p433
Lymer, A., and McGeehan, J.P. see McGeehan, J.P.

M

McGeehan, J.P., and Burrows, D.F. Large signal performance of feedback automatic gain control systems p110
McGeehan, J.P., and Burrows, D.F. Performance limits of feedforward automatic gain control in AM and SSB mobile radio receivers p385
McGeehan, J.P., and Lymer, A. Problem of speech pulling and its implications for the design of phase-locked SSB radio systems p361
McQuilton, D. Effective constraint length of 'cyclic' convolutional self orthogonal codes p69
McVerry, F., and Clark, A.P. see Clark, A.P.
Mark, J.W. Adaptive decision-feedback predictive coding of digital sources p155
Mathews, N.A., and Aghvami, A.H. Binary and quaternary CPSK transmissions through nonlinear channels in additive Gaussian noise and cochannel interference p96
Mathews, N.A., and Riris, A. Performance analysis of QPSK transmission through a direct phase regenerator p91

Mavor, J., and Cowan, C.F.N. see Cowan, C.F.N.
Miller, R.L., Reed, I.S., Truong, T.K., and Huang, J.P. see Reed, I.S.
Musha, T., Sekine, M., Ohtani, S., Irabu, T., Kiuchi, E., Hagisawa, T., and Tomita, Y. see Sekine, M.

N

Nehorai, A., and Reddy, V.U. see Reddy, V.U.

O

Ohtani, S., Sekine, M., Musha, T., Irabu, T., Kiuchi, E., Hagisawa, T., and Tomita, Y. see Sekine, M.
Olaniyan, O.O. Performance of forward error correction and feedback coding schemes p15
Olver, A.D., Carr, A.E., and Cuthbert, L.E. see Carr, A.E.
Ormondroyd, R.F., and Shipton, M.S. see Shipton, M.S.
Ouzas, N., and Haykin, S. Carrier tracking loop for data transmission using single-sideband modulation p347

P

Pandit, M. Mean acquisition time of active- and passive-correlation acquisition systems for spread-spectrum communication systems p211
Parsons, J.D., Edwards, J.A., and Albert-Osaghae, V.K.I. see Edwards, J.A.
Pasupathy, S., and Hirt, W. see Hirt, W.
Peck, D.J. Avionics (Editorial) p401
Poelman, A.J. Virtual polarisation adaption p261
Poo, G.S. Computer aids for code spectra calculations p323
Potter, K.E. Techniques for overhead-wire detection p427

R

Rahman, M. Application of tactical design in construction of codes (Summary) p222
Ramamurthy, N., Wong, K.M., and Aatre, V.K. see Wong, K.M.
Reddy, V.U., and Nehorai, A. Response of adaptive line enhancer to a sinusoid in lowpass noise p161
Reed, I.S., Truong, T.K., Miller, R.L., and Huang, J.P. Fast transforms for decoding Reed-Solomon codes p9
Reid, G.M., and White, T.A. see White, T.A.
Rezaee, N., and Hawksford, M.J. see Hawksford, M.J.
Riris, A., and Mathews, N.A. see Mathews, N.A.
Robins, W.P. New notation for phase noise and phase jitter p187
Roe, G. Advanced cockpit for tactical aircraft p419
Rotheram, S. Ground-wave propagation. Part 1: Theory for short distances p275
Rotheram, S. Ground-wave propagation. Part 2: Theory for medium and long distances and reference propagation curves p285
Rudge, A.W., Crone, G.A.E., and Taylor, G.N. see Crone, G.A.E.

S

Sandilands, H.R., and Taylor, B. Management of a large avionics project p408
Sarwate, D.V., and Stark, W.E. see Stark, W.E.
Sekine, M., Ohtani, S., Musha, T., Irabu, T., Kiuchi, E., Hagisawa, T., and Tomita, Y. Suppression of ground and weather clutter p175
Shipton, M.S., and Ormondroyd, R.F. Improvements in use of congested spectrum for land mobile radio service by adoption of bandsharing spread-spectrum system with TV broadcast channels p245
Skaug, R., and Hjelmstad, J. see Hjelmstad, J.
Stark, W.E., and Sarwate, D.V. Kronecker sequences for spread-spectrum communication p104
Stevens, M.C. Multipath and interference effects in secondary surveillance radar systems p43
Sundberg, C-E., Aulin, T., and Lindell, G. see Aulin, T.

T

Tamvaclis, C. Filtration of separable finite discrete signals p1
Taylor, B., and Sandilands, H.R. see Sandilands, H.R.
Taylor, G.N., Crone, G.A.E., and Rudge, A.W. see Crone, G.A.E.
Todd, P.H. Direct minimal-order Markov model for sliding-window detection probabilities p152
Tomita, Y., Sekine, M., Ohtani, S., Musha, T., Irabu, T., Kiuchi, E., and Hagisawa, T. see Sekine, M.
Trivedi, M., and Lever, K.V. Measured performance of block-floating-point hardware FFT processor for real-time speech transform coding p54
Truong, T.K., Reed, I.S., Miller, R.L., and Huang, J.P. see Reed, I.S.
Turner, L.F., and Farhang-Boroujeny, B. see Farhang-Boroujeny, B.

U

Usher, E.S., and Beasley, M. see Beasley, M.

V

van Etten, W., and de Jong, E. Joint optimisation of transmitter and receiver for digital transmission over multiple-channel systems p28

W

White, R.A., Clarke, R.N., and Yell, R.W. VOR waveform synthesis and calibration p443
White, T.A., and Reid, G.M. Quality of PAL colour television pictures impaired by random noise: stability of subjective assessment p231
Winfield, A.F.T., and Goodman, R.M.F. see Goodman, R.M.F.
Wirth, W.D. Signal processing for target detection in experimental phased-array radar ELRA p311
Wong, K.M., Aatre, V.K., and Ramamurthy, N. Properties and applications of some periodically varying digital signal processors p74

Y

Yell, R.W., White, R.A., and Clarke, R.N. see White, R.A.

Subject index

ADAPTIVE CONTROL

Adaptive mean-square-error transversal equaliser. M.J.Hawksford and N.Rezaee p296
Jamming rejection capability of broadband Frost power inversion array. C.C.Ko p140

AEROSPACE FACILITIES AND TECHNIQUES

Advanced cockpit for tactical aircraft. G.Roe p419
AEW Nimrod: the Mission System Avionics. A.C.Leacy p403
Airborne electronic displays. G.H.Hunt p465
Avionics (Editorial). D.J.Peck p401
Design and performance of airborne radomes: a review. G.A.E.Crone, A.W.Rudge and G.N.Taylor p451
Head-up displays. The integrity of flight information. L.L.Dopping-Hepenstal p440
Management of a large avionics project. H.R.Sandilands and B.Taylor p408
Multipath and interference effects in secondary surveillance radar systems. M.C.Stevens p43
Special problems associated with aircraft radomes. D.A.Conti p412
Techniques for overhead-wire detection. K.E.Potter p427
Trends in maintainability and reliability of avionic systems with particular reference to DCAD Technical Publication 1/77. A.F.Loy p433
VOR waveform synthesis and calibration. R.A.White, R.N.Clarke and R.W.Yell p443

ALGEBRA
(incl. Matrix Algebra)

Filtration of separable finite discrete signals. C.Tamvaclis p1
Predictors of maximum-likelihood performance of an unknown channel. G.W.Irwin p23

ANTENNAS AND PROPAGATION

Jamming rejection capability of broadband Frost power inversion array. C.C.Ko p140
Multipath and interference effects in secondary surveillance radar systems. M.C.Stevens p43

CLOSED-LOOP SYSTEMS

Large signal performance of feedback automatic gain control systems. J.P.McGeehan and D.F.Burrows p110

CODES AND DECODING

Adaptive decision-feedback predictive coding of digital sources. J.W.Mark p155
Application of tactical design in construction of codes (Summary). M.Rahman p222
Carrier tracking loop for data transmission using single-sideband modulation. N.Ouzas and S.Haykin p347
Computer aids for code spectra calculations. G.S.Poo p323
Effective constraint length of 'cyclic' convolutional self orthogonal codes. D.McQuilton p69
Fast transforms for decoding Reed-Solomon codes. I.S.Reed, T.K.Truong, R.L.Miller and J.P.Huang p9
Kronecker sequences for spread-spectrum communication. W.E.Stark and D.V.Sarwate p104
Performance of forward error correction and feedback coding schemes. O.O.Olaniyan p15
Soft-decision minimum-distance sequential decoding algorithm for convolutional codes. R.M.F.Goodman and A.F.T.Winfield p179

COMPUTER APPLICATIONS

Computer aids for code spectra calculations. G.S.Poo p323
Ground-wave propagation. Part 1: Theory for short distances. S.Rotheram p275
Ground-wave propagation. Part 2: Theory for medium and long distances and reference propagation curves. S.Rotheram p285

COMPUTER GRAPHICS

Laser-radar signature-processing system. G.A.Bundell p215

DETECTORS

Detection of digital signals transmitted over a known time-varying channel. A.P.Clark and S.M.Asghar p167

DIGITAL CIRCUITS

New digital adaptive-filter implementation using distributed-arithmetic techniques. C.F.N.Cowan and J.Mavor p225

DIGITAL COMMUNICATION SYSTEMS AND SIGNALLING

Binary and quaternary CPSK transmissions through nonlinear channels in additive Gaussian noise and cochannel interference. N.A.Mathews and A.H.Aghvami p96
Detection of digital signals transmitted over a known time-varying channel. A.P.Clark and S.M.Asghar p167
Error rate prediction in binary FSK communication systems subjected to impulsive noise. J.A.Edwards, J.D.Parsons and V.K.I.Albert-Osaghae p337
Error rate prediction in binary FSK communication systems subjected to impulsive noise: an extended second-order technique. J.A.Edwards, J.D.Parsons and V.K.I.Albert-Osaghae p342
Fast synchronisation modem for spread-spectrum communication system using burst-format message signalling. J.Hjelmstad and R.Skaug p370
Joint optimisation of transmitter and receiver for digital transmission over multiple-channel systems. W.van Etten and E.de Jong p28
Performance analysis of QPSK transmission through a direct phase regenerator. N.A.Mathews and A.Riris p91
Pre-emptive retransmission for communication over noisy channels. N.D.Birrell p393
Properties and applications of some periodically varying digital signal processors. K.M.Wong, V.K.Aatre and N.Ramamurthy p74
Selecting smoothing pulses for partial-response digital FM. T.Aulin, G.Lindell and C-E.Sundberg p237
Use and extrapolation of barrage measurements in formulating PCM planning rules. M.Beasley and E.S.Usher p203

DIGITAL SIMULATION

Further results on predicting the maximum-likelihood performance of an unknown channel. G.W.Irwin p223
New digital adaptive-filter implementation using distributed-arithmetic techniques. C.F.N.Cowan and J.Mavor p225

ENGINEERING ADMINISTRATION AND MANAGEMENT

Management of a large avionics project. H.R.Sandilands and B.Taylor p408

ERRORS AND ERROR ANALYSIS

AGC response and target glint. A.J.Dunlop p83
Carrier tracking loop for data transmission using single-sideband modulation. N.Ouzas and S.Haykin p347
Error rate prediction in binary FSK communication systems subjected to impulsive noise. J.A.Edwards, J.D.Parsons and V.K.I.Albert-Osaghae p337
Error rate prediction in binary FSK communication systems subjected to impulsive noise: an extended second-order technique. J.A.Edwards, J.D.Parsons and V.K.I.Albert-Osaghae p342
Fast transforms for decoding Reed-Solomon codes. I.S.Reed, T.K.Truong, R.L.Miller and J.P.Huang p9
Performance of forward error correction and feedback coding schemes. O.O.Olaniyan p15
Pre-emptive retransmission for communication over noisy channels. N.D.Birrell p393
Soft-decision minimum-distance sequential decoding algorithm for convolutional codes. R.M.F.Goodman and A.F.T.Winfield p179
Suboptimal reception of binary CPSK signals. W.Hirt and S.Pasupathy p125

FEEDBACK

Large signal performance of feedback automatic gain control systems. J.P.McGeehan and D.F.Burrows p110
Performance of forward error correction and feedback coding schemes. O.O.Olaniyan p15

FILTERS, FILTERING AND PREDICTION THEORY

Jamming rejection capability of broadband Frost power inversion array. C.C.Ko p140
Joint optimisation of transmitter and receiver for digital transmission over multiple-channel systems. W.van Etten and E.de Jong p28
LSI module for the implementation of digital filters. J.G.M.Goncalves and R.M.Lea p353
New digital adaptive-filter implementation using distributed-arithmetic techniques. C.F.N.Cowan and J.Mavor p225

Properties and applications of some periodically varying digital signal processors. K.M.Wong, V.K.Aatre and N.Ramamurthy p74
Virtual polarisation adaption. A.J.Poelman p261

IMAGE PROCESSING

Relation between the Karhunen Loève and cosine transforms. R.J.Clarke p359

INFORMATION AND COMMUNICATION THEORY

Airborne electronic displays. G.H.Hunt p465
Mean acquisition time of active- and passive-correlation acquisition systems for spread-spectrum communication systems. M.Pandit p211

INSTRUMENTATION AND MEASURING SCIENCE

Airborne electronic displays. G.H.Hunt p465
Head-up displays. The integrity of flight information. L.L.Dopping-Hepenstal p440
VOR waveform synthesis and calibration. R.A.White, R.N.Clarke and R.W.Yell p443

LASERS

Laser-radar signature-processing system. G.A.Bundell p215
Techniques for overhead-wire detection. K.E.Potter p427

MATHEMATICAL TECHNIQUES

Adaptive decision-feedback predictive coding of digital sources. J.W.Mark p155
Adaptive mean-square-error transversal equaliser. M.J.Hawksford and N.Rezaee p296
Direct minimal-order Markov model for sliding-window detection probabilities. P.H.Todd p152
Fast converging stochastic gradient algorithm. B.Farhang-Boroujeny and L.F.Turner p271
Filtration of separable finite discrete signals. C.Tamvaclis p1
Ground-wave propagation. Part 1: Theory for short distances. S.Rotheram p275
Ground-wave propagation. Part 2: Theory for medium and long distances and reference propagation curves. S.Rotheram p285
Measured performance of block-floating-point hardware FFT processor for real-time speech transform coding. M.Trivedi and K.V.Lever p54
New digital adaptive-filter implementation using distributed-arithmetic techniques. C.F.N.Cowan and J.Mavor p225
Response of adaptive line enhancer to a sinusoid in lowpass noise. V.U.Reddy and A.Nehorai p161
Sequential radar detection of border penetration. L.E.Kazovsky p305
Soft-decision minimum-distance sequential decoding algorithm for convolutional codes. R.M.F.Goodman and A.F.T.Winfield p179
Techniques for overhead-wire detection. K.E.Potter p427

MODULATION

AM/FM modulation standard. C.J.Kikkert p379
Analysis of response of FM mobile receiver in quasisynchronous field. M.O.Al-Nuaimi p317
Carrier tracking loop for data transmission using single-sideband modulation. N.Ouzas and S.Haykin p347
Channel estimation for an HF radio link. A.P.Clark and F.McVerry p33
Improvements in use of congested spectrum for land mobile radio service by adoption of bandsharing spread-spectrum system with TV broadcast channels. M.S.Shipton and R.F.Ormondroyd p245
New method for generating frequency modulation. C.J.Kikkert p135
Selecting smoothing pulses for partial-response digital FM. T.Aulin, G.Lindell and C-E.Sundberg p237

NOISE AND INTERFERENCE

Binary and quaternary CPSK transmissions through nonlinear channels in additive Gaussian noise and cochannel interference. N.A.Mathews and A.H.Aghvami p96
Correlation of HF interference spectra with range. S.Dutta and G.F.Gott p193
Error rate prediction in binary FSK communication systems subjected to impulsive noise. J.A.Edwards, J.D.Parsons and V.K.I.Albert-Osaghae p337
Error rate prediction in binary FSK communication systems subjected to impulsive noise: an extended second-order technique. J.A.Edwards, J.D.Parsons and V.K.I.Albert-Osaghae p342
Joint optimisation of transmitter and receiver for digital transmission over multiple-channel systems. W.van Etten and E.de Jong p28
Multipath and interference effects in secondary surveillance radar systems. M.C.Stevens p43
New notation for phase noise and phase jitter. W.P.Robins p187
Optimum receiver for impulsive atmospheric radio noise. V.K.Jain and S.N.Gupta p189
Pre-emptive retransmission for communication over noisy channels. N.D.Birrell p393
Problem of speech pulling and its implications for the design of phase-locked SSB radio systems. J.P.McGeehan and A.Lymer p361
Quality of PAL colour television pictures impaired by random noise: stability of subjective assessment. T.A.White and G.M.Reid p231
Use and extrapolation of barrage measurements in formulating PCM planning rules. M.Beasley and E.S.Usher p203
Virtual polarisation adaption. A.J.Poelman p261

OPTIMAL CONTROL

Joint optimisation of transmitter and receiver for digital transmission over multiple-channel systems. W.van Etten and E.de Jong p28

PHASING AND PHASE CONTROL

Binary and quaternary CPSK transmissions through nonlinear channels in additive Gaussian noise and cochannel interference. N.A.Mathews and A.H.Aghvami p96
New notation for phase noise and phase jitter. W.P.Robins p187
Performance analysis of QPSK transmission through a direct phase regenerator. N.A.Mathews and A.Riris p91

PICTURE PROCESSING AND PATTERN RECOGNITION

Modern colour display and processing system for meteorological radars. N.A.Cunningham p61

PULSE-CODE MODULATION

Measured performance of block-floating-point hardware FFT processor for real-time speech transform coding. M.Trivedi and K.V.Lever p54
Use and extrapolation of barrage measurements in formulating PCM planning rules. M.Beasley and E.S.Usher p203

RADAR AND RADIONAVIGATION

AGC response and target glint. A.J.Dunlop p83
Digital signal processing for target detection in FMCW radar. A.E.Carr, L.E.Cuthbert and A.D.Olver p331
Laser-radar signature-processing system. G.A.Bundell p215
Modern colour display and processing system for meteorological radars. N.A.Cunningham p61
Multipath and interference effects in secondary surveillance radar systems. M.C.Stevens p43
Sequential radar detection of border penetration. L.E.Kazovsky p305
Signal processing for target detection in experimental phased-array radar ELRA. W.D.Wirth p311
Suppression of ground and weather clutter. M.Sekine, S.Ohtani, T.Musha, T.Irabu, E.Kiuchi, T.Hagisawa and Y.Tomita p175
Techniques for overhead-wire detection. K.E.Potter p427
Virtual polarisation adaption. A.J.Poelman p261

RADIO-WAVE PROPAGATION
(incl. Ionospheric and Tropospheric)

Correlation of HF interference spectra with range. S.Dutta and G.F.Gott p193

RADIOCOMMUNICATION

AM/FM modulation standard. C.J.Kikkert p379
Analysis of response of FM mobile receiver in quasisynchronous field. M.O.Al-Nuaimi p317
Error rate prediction in binary FSK communication systems subjected to impulsive noise. J.A.Edwards, J.D.Parsons and V.K.I.Albert-Osaghae p337
Error rate prediction in binary FSK communication systems subjected to impulsive noise: an extended second-order technique. J.A.Edwards, J.D.Parsons and V.K.I.Albert-Osaghae p342
Further results on predicting the maximum-likelihood performance of an unknown channel. G.W.Irwin p223

Improvements in use of congested spectrum for land mobile radio service by adoption of bandsharing spread-spectrum system with TV broadcast channels. M.S.Shipton and R.F.Ormondroyd p245
New method for generating frequency modulation. C.J.Kikkert p135
Optimum receiver for impulsive atmospheric radio noise. V.K.Jain and S.N.Gupta p189
Performance limits of feedforward automatic gain control in AM and SSB mobile radio receivers. J.P.McGeehan and D.F.Burrows p385
Problem of speech pulling and its implications for the design of phase-locked SSB radio systems. J.P.McGeehan and A.Lymer p361

RELIABILITY

Trends in maintainability and reliability of avionic systems with particular reference to DCAD Technical Publication 1/77. A.F.Loy p433

SIGNAL PROCESSING

Adaptive decision-feedback predictive coding of digital sources. J.W.Mark p155
Channel estimation for an HF radio link. A.P.Clark and F.McVerry p33
Digital signal processing for target detection in FMCW radar. A.E.Carr, L.E.Cuthbert and A.D.Olver p331
Direct minimal-order Markov model for sliding-window detection probabilities. P.H.Todd p152
Fast converging stochastic gradient algorithm. B.Farhang-Boroujeny and L.F.Turner p271
Fast synchronisation modem for spread-spectrum communication system using burst-format message signalling. J.Hjelmstad and R.Skaug p370
Filtration of separable finite discrete signals. C.Tamvaclis p1
Large signal performance of feedback automatic gain control systems. J.P.McGeehan and D.F.Burrows p110
LSI module for the implementation of digital filters. J.G.M.Goncalves and R.M.Lea p353
Measured performance of block-floating-point hardware FFT processor for real-time speech transform coding. M.Trivedi and K.V.Lever p54
New notation for phase noise and phase jitter. W.P.Robins p187
Properties and applications of some periodically varying digital signal processors. K.M.Wong, V.K.Aatre and N.Ramamurthy p74
Response of adaptive line enhancer to a sinusoid in lowpass noise. V.U.Reddy and A.Nehorai p161
Signal processing for target detection in experimental phased-array radar ELRA. W.D.Wirth p311
Suboptimal reception of binary CPSK signals. W.Hirt and S.Pasupathy p125

SIMULATION

Adaptive decision-feedback predictive coding of digital sources. J.W.Mark p155
Buffer design in a closed form with hybrid input and random server interruptions. H.B.Kekre and M.Khalid e82
Channel estimation for an HF radio link. A.P.Clark and F.McVerry p33
Correlation of HF interference spectra with range. S.Dutta and G.F.Gott p193
Error rate prediction in binary FSK communication systems subjected to impulsive noise. J.A.Edwards, J.D.Parsons and V.K.I.Albert-Osaghae p337
Properties and applications of some periodically varying digital signal processors. K.M.Wong, V.K.Aatre and N.Ramamurthy p74
Quality of PAL colour television pictures impaired by random noise: stability of subjective assessment. T.A.White and G.M.Reid p231

SOUND BROADCASTING AND AUDIO

Analysis of response of FM mobile receiver in quasisynchronous field. M.O.Al-Nuaimi p317
Improvements in use of congested spectrum for land mobile radio service by adoption of bandsharing spread-spectrum system with TV broadcast channels. M.S.Shipton and R.F.Ormondroyd p245

SPECTRAL ANALYSIS

Response of adaptive line enhancer to a sinusoid in lowpass noise. V.U.Reddy and A.Nehorai p161
Selecting smoothing pulses for partial-response digital FM. T.Aulin, G.Lindell and C-E.Sundberg p237

SPEECH SYNTHESIS

Measured performance of block-floating-point hardware FFT processor for real-time speech transform coding. M.Trivedi and K.V.Lever p54

SURFACE-ACOUSTIC-WAVE DEVICES (SAW)

Fast synchronisation modem for spread-spectrum communication system using burst-format message signalling. J.Hjelmstad and R.Skaug p370

TELECOMMUNICATION

Further results on predicting the maximum-likelihood performance of an unknown channel. G.W.Irwin p223
Kronecker sequences for spread-spectrum communication. W.E.Stark and D.V.Sarwate p104

TELEVISION

Modern colour display and processing system for meteorological radars. N.A.Cunningham p61
Quality of PAL colour television pictures impaired by random noise: stability of subjective assessment. T.A.White and G.M.Reid p231

TRANSFORMS

Fast transforms for decoding Reed-Solomon codes. I.S.Reed, T.K.Truong, R.L.Miller and J.P.Huang p9
Measured performance of block-floating-point hardware FFT processor for real-time speech transform coding. M.Trivedi and K.V.Lever p54
Relation between the Karhunen Loève and cosine transforms. R.J.Clarke p359
VOR waveform synthesis and calibration. R.A.White, R.N.Clarke and R.W.Yell p443

TRANSMISSION-LINE THEORY

Adaptive mean-square-error transversal equaliser. M.J.Hawksford and N.Rezaee p296

TRANSMITTERS

Joint optimisation of transmitter and receiver for digital transmission over multiple-channel systems. W.van Etten and E.de Jong p28
New method for generating frequency modulation. C.J.Kikkert p135
Optimum receiver for impulsive atmospheric radio noise. V.K.Jain and S.N.Gupta p189

WAVE PROPAGATION

Ground-wave propagation. Part 1: Theory for short distances. S.Rotheram p275
Ground-wave propagation. Part 2: Theory for medium and long distances and reference propagation curves. S.Rotheram p285

Book Reviews

Digital signal processing: V. Cappelini, A.G. Constantinides p336
Elastic waves in solids: applications to signal processing: E. Dieulesaint, D. Royer p346
Introduction to adaptive arrays: R.A. Monzingo, T.W. Miller p188
Introduction to queueing theory (2nd Edn.): R.B. Cooper p378
Programs for digital signal processing: IEEE Acoustics, Speech and Signal Processing Society p221
Solid-state radio engineering: H.L. Krauss, C.W. Bostian, F.H. Raab p109
Standards for television and local radio stations (IBA Technical Review 13) p346

Conference Reports

Military microwaves '80 conference p118
NATO Advanced Study Institute on signal processing: underwater acoustics p123